REMARKS

This application has been carefully reviewed in light of the non-final Office Action dated March 6, 2007. Claims 22 to 24 have been added herein. Claims 1 to 14 and 21 to 24 are in the application, of which claims 1, 9, 14 and 24 are the independent claims. Reconsideration and further examination are respectfully requested.

Initially, the Applicant notes that, since support for the substance of the new claims is found throughout the disclosure, including at least pages 7 to 9 of the specification and FIGS. 2 and 3, no new matter is believed to have been added.

Furthermore, the Applicant's undersigned representative thanks Examiner Dwivedi for the thoughtful courtesies and kind treatment afforded during the personal interview conducted on May 17, 2007. In the interview, Applicant's representative discussed how the applied art is not seen to disclose the features recited by the independent claims, including, *inter alia*, the feature that the sorted result buffer is <u>iteratively</u> ordered based upon the order criteria. At the conclusion of the interview, Examiner Dwivedi tentatively agreed that Amor did not teach this feature, although he indicated that further search and consideration would be required. All parties agreed, however, that the interview generally aided the mutual understanding of the disclosure and advanced prosecution of the application.

In the Office Action, claims 1 to 14 and 21 were rejected under 35 U.S.C. § 102(e) over U.S. Patent No. 6,546,382 ("Amor"). Reconsideration and withdrawal of the § 102(e) rejection, therefore, are respectfully requested.

The present disclosure generally relates to satisfying limit and order queries. A limit and order query is received that includes both of an order criteria and a limit criteria, the limit criteria specifying a maximum number N of records for a result set of records satisfying the limit and order query, and filling a constant-sized sorted result buffer with a first N number of records from a data store. The sorted result buffer is iteratively ordered based upon the order criteria, and remaining records in the data store are iteratively compared against a Nth record in the sorted result buffer based upon the order criteria. Additionally, the Nth record in the sorted result buffer is iteratively replaced with a remaining record in the data store based upon iteratively comparing

remaining records in the data store against the Nth record in the sorted result buffer, and the sorted result buffer is output as the result set of records.

Referring to particular claim language, independent claim 9 recites a method for satisfying limit and order queries. The method includes receiving a limit and order query that includes both of an order criteria and a limit criteria, the limit criteria specifying a maximum number N of records for a result set of records satisfying the limit and order query, and filling a constant-sized sorted result buffer with a first N number of records from a data store. The method further includes iteratively ordering the sorted result buffer based upon the order criteria, and iteratively comparing remaining records in the data store against a Nth record in the sorted result buffer based upon the order criteria. Moreover, the method includes iteratively replacing the Nth record in the sorted result buffer with a remaining record in the data store based upon iteratively comparing remaining records in the data store against the Nth record in the sorted result buffer, and outputting the sorted result buffer as the result set of records.

Independent claims 1 and 14 recite a system and an apparatus that substantially correspond to the method recited by independent claim 9.

Independent claim 24 recites a method for satisfying limit and order queries. The method includes receiving a standard query language (SQL) formatted limit and order query that includes both of an order criteria and a limit criteria, the limit and order criteria requesting the first or last N records satisfying the order criteria, and the limit criteria specifying a maximum number N of records for a result set of records satisfying the limit and order query, and filling a constant-sized sorted result buffer with a first N number of records from a data store of a customer relationship management system, an enterprise resource planning system or a supply chain management system, the data store comprising a database or a fast cache. Filling the sorted result buffer with the first N number of records from the data store further includes scanning the data store without consideration of the order criteria to identify records otherwise satisfying the limit and order query, and placing identified records into the sorted result buffer until the sorted result buffer includes the maximum number of records specified by the limit criteria. The method also includes iteratively ordering the sorted result buffer based upon the order criteria, and iteratively comparing remaining records in the data store against a Nth record in the sorted result buffer based upon the order criteria. Furthermore, the method includes

Applicant : Burkhard K. Neidecker-Lutz   Attorney's Docket No.: 13909-128001 / 2003P00162
Serial No. : 10/679,498   US
Filed   : October 7, 2003
Page   : 9 of 10

iteratively replacing the Nth record in the sorted result buffer with a remaining record in the data store based upon iteratively comparing remaining records in the data store against the Nth record in the sorted result buffer, and outputting the sorted result buffer as the result set of records.

The applied art is not seen to disclose, teach, or to suggest the foregoing features recited by the independent claims. In particular, Amor is not seen to disclose at least the features that i) the sorted result buffer is <u>iteratively ordered</u> based upon the order criteria, *ii)* the **Nth record** in the sorted result buffer is iteratively replaced with a remaining record in the data store based upon iteratively comparing remaining records in the data store against the Nth record in the sorted result buffer.

Amor describes a method for finding ordered TOP N rows in order values from a set of data. See, Amor, Col. 1:5 – 9; Col. 3:25 – 37. In Amor, rows are stored in the buffer, a threshold value of the buffer is detected, a new row is retrieved from the remaining records of the data, and the new row value is compared with the threshold value. See, Amor , Col. 3:38 – 4:31. Furthermore, the row of threshold value is replaced with the new row if the new row's value is greater or less than the threshold value, and update the threshold accordingly, and this process is repeated until the last record is reviewed. See, Amor, Col. 4:12 – 64. Finally, after all the rows have been processed, the buffer is understood to be sorted or ordered <u>once</u>. See, Amor, Col. 5: 9 - 15, step 160.

Therefore, since Amor is merely seen to describe ordering the buffer <u>once</u>, at the conclusion of the replacement process, it is not seen to disclose at least the feature that the sorted result buffer is <u>iteratively ordered</u> based upon the order criteria. Further, since the row of threshold value's position in the buffer is random, Amor is not seen to disclose the feature that the **Nth record** in the sorted result buffer is iteratively replaced with a remaining record in the data store based upon iteratively comparing remaining records in the data store against the Nth record in the sorted result buffer.

Accordingly, based on the foregoing amendments and remarks, independent claims 1, 9, 14 and 24 are believed to be allowable over the applied references. The other rejected claims in the application are each dependent from the independent claims and are believed to be allowable over the applied references for at least the same reasons. Because each dependent claim is

deemed to define additional aspects of the disclosure, however, the individual consideration of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance and such action is respectfully requested at the Examiner's earliest convenience.

The fees in the amount of $300 for the excess claims are being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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